

Claim Amendments

1. (currently amended) A network device comprising:
~~at least one control processor;~~
at least two control processors running different protocol stacks;
~~at least one forwarding processor communicatively coupled to the at least one control processor~~
two control processors;
at least one ingress interface for connecting the network device to a network; ~~and~~
a packet handler interposed between the at least one forwarding processor and the at least one ingress interface, said packet handler being constructed and arranged to receive a packet from the ingress interface, determine if it is bound for one of the at least two control processors, and, if so, direct it to the one of the at least two control processors; and
a virtual interface interposed between the ~~control processor~~ at least two control processors and the ingress interface, said virtual interface being constructed and arranged to receive a packet from the ingress interface, determine if it is compatible with an operating system running on ~~the control processor~~ the one of the at least two control processors, and, if necessary, convert it to a compatible format for the operating system.
2. (original) The network device of claim 1 wherein said network device comprises a router.
3. (original) The network device of claim 1 wherein said network device comprises a switch.
4. (original) The network device of claim 1 wherein said network device is configured to run different operating systems on said control processor and said forwarding processor.
5. (original) The network device of claim 1 wherein said virtual interface is further constructed and arranged to receive a packet from the control processor, determine if it is

compatible with an operating system running on the forwarding processor, and, if necessary, convert it to a compatible format for the forwarding-processor operating system.

6. (original) The network device of claim 1 wherein said network device further includes at least one egress interface for connecting the network device to a network and wherein said network device further comprises a packet handler constructed and arranged to direct a packet from the control processor to a selected egress interface.

7. (previously presented) The network device of claim 1 wherein said virtual interface is further constructed and arranged to select an appropriate control processor input port to receive the packet.

8. (cancelled)

9. (previously presented) A network device comprising:
at least two control processors running different protocol stacks;
at least one forwarding processor communicatively coupled to the at least two control processors;
at least one ingress interface for connecting the network device to a network; and
a packet handler interposed between the forwarding processor and the ingress interface, said packet handler being constructed and arranged to receive a packet from the ingress interface, determine if it is bound for one of the control processors, and, if so, direct it to said one control processor.

10. (original) The network device of claim 9 wherein said network device comprises a router.

11. (original) The network device of claim 9 wherein said network device comprises a switch.

12. (original) The network device of claim 9 wherein said network device is configured to run different operating systems on at least one of said control processors and said forwarding processor.

13. (original) The network device of claim 9 wherein said network device further includes a virtual interface interposed between the control processor and the ingress interface, said virtual interface being constructed and arranged to receive a packet from the ingress interface, determine if it is compatible with an operating system running on the control processor, and, if necessary, convert it to a compatible format for the operating system.

14. (original) The network device of claim 13 wherein said virtual interface is further constructed and arranged to receive a packet from the control processor, determine if it is compatible with an operating system running on the forwarding processor, and, if necessary, convert it to a compatible format for the forwarding-processor operating system.

15. (original) The network device of claim 9 wherein said network device further includes at least one egress interface for connecting the network device to a network and wherein said network device further comprises a packet handler constructed and arranged to direct a packet from the control processor to a selected egress interface.

16. (currently amended) A method for operating a data network having control and forwarding elements comprising:

receiving a data packet at a device on the network;

determining if the packet is bound for a forwarding element or a control element, in which the forwarding element and the control element comprises processors;

running one operating system on the forwarding element and running a different operating system on the control element;

determining whether the packet format is compatible with the element for which it is bound; and

if necessary, converting the format into one that is compatible with the element for which it is bound.

17. (original) The method of claim 16 wherein said method further comprises forwarding the data packet to another device on the network.

18. (original) The method of claim 16 wherein said method comprises routing the data packet.

19. (cancelled)

20. (original) A processing system comprising a processor, which when executing a set of instructions performs the method of claim 16.

21. (currently amended) A ~~machine-readable~~ computer readable medium ~~having stored thereon~~ encoded with computer executable instructions, which when executed performs the method of claim 16.